LAUREA UNIVERSITY OF APPLIED SCIENCES Prime Mover

The Secret Recipe for Future Supply Chains – The Silent Voice of the Customer

Case: Freight Forwarding Company X

Pyykönen, Mia

2013 Kerava

Laurea University of Applied Sciencies
Kerava Kerava

The Secret Recipe for Future Supply Chains – The Silent Voice of the Customer
Case: Freight Forwarding Company X

Mia Pyykönen
Degree Programme in
Entrepreneur and Business,
User-Centered Design
Master's Thesis
October, 2013

Laurea-ammattikorkeakoulu **Tiivistelmä**
Laurea Kerava
Yrittäjyyden ja liiketoiminta-osaamisen koulutusohjelma,
Käyttäjäkeskeinen suunnittelu
Tradenomi (Ylempi AMK)

Mia Pyykönen

Tulevaisuuden toimitusketjun salainen resepti – asiakkaan hiljainen ääni
Case: Freight Forwarding Company X

Vuosi 2013 Sivumäärä 51

Tässä opinnäytetyössä tutkittiin tulevaisuusverstaan käytön antamia mahdollisuuksia Freight Forwarding Company X:n tuoteportfolion sekä asiakaspalvelun aukkojen löytämisessä ja niiden parantamisessa. Tutkimuksellinen kehitystyö tehtiin toimeksiantona Freight Forwarding Company X:lle, joka on sveitsiläinen huolinta-alan yritys, jonka ydintoimintaa ovat kansainväliset lento- ja merikuljetukset sekä logistiikan lisäarvopalvelut.

Tutkimuksen tavoitteena oli selvittää, lisääkö tulevaisuusverstaan käyttö ymmärrystä Freight Forwarding Company X:n tuotteiden ja palveluiden puutteista asiakkaan näkökulmasta ja toisaalta, ideoida yhdessä asiakkaan kanssa, miten havaittuja puutteita tai ongelmia voitaisiin ratkaista. Tavoitteena oli myös tutkia, voisiko tulevaisuusverstaan käyttö tuoda esiin ideoita palveluinnovaatiosta. Tutkimustulosten perusteella haluttiin parantaa asiakkaiden palvelukokemusta ja tehdä siitä mahdollisimman sujuva ja miellyttävä.

Tutkimuksen teossa käytettiin laadullista tutkimusotetta. Menetelmävalinta oli tulevaisuusverstas, joka kuuluu käyttäjäkeskeisen suunnittelun menetelmiin. Tulevaisuusverstas sopii erityisen hyvin käytettäväksi tilanteisiin, joissa osallistuvilla ihmisillä on vähän kokemusta luovasta päätöksentekoprosessista. Tutkimuseen osallistui neljä henkilöä eri asiakasyrityksistä. Kutsu tilaisuuteen lähetettiin asiakkaille, jotka sijaitsevat pääkaupaunkiseudulla ja joista kaikki olivat käyttäneet Freight Forwarding Company X:n palveluksia säännöllisesti edeltävän vuoden aikana. Osallistumisehdoksi asetettiin sen, että kutsuttavilla henkilöillä täytyi olla päätäntävaltaa kuljetusten ostoihin liittyvissä päätöksissä. Asiakasvalinnat tehtiin yhdessä Freight Forwarding Company X:n johdon kanssa.

Työn teoreettisessa viitekehyksessä käsitellään käytettävyyttä, käyttäjätietoa sekä käyttäjäkeskeistä suunnittelua ja palvelumuotoilua. Käyttäjäkeskeisen suunnittelun menelmistä keskityttiin erityisesti tulevaisuusverstaaseen. Liiketoiminnan näkökulmasta käsiteltiin tilaus-toimitusketjun hallintaa erityisesti kansainvälisten kuljetusten näkökulmasta.

Tutkimustulosten perusteella voidaan sanoa, että tulevaisuusverstas oli onnistunut. Esille tuli muun muassa asiakaspalvelun joustamattomuus sekä IT-järjestelmiin liittyviä puutteita. Tulevaisuusverstaan ideaosuudessa korostettiin paljon kokonaisvaltaisen ratkaisutarjonnan tärkeyttä sekä sitä, että kuljetusketjun läpinäkyvyyttä täytyy parantaa. Tuloksien perusteella voidaan todeta, että asiakkaat haluavat mieluiten ostaa käyttämänsä palvelut yhdeltä toimittajalta saaden rahansa takaisin, jos poikkeamia luvattuun hintaan tai kuljetusaikaan tulee.

Tutkimuksessa nousi esiin muutamia yksityiskohtia, palvelueleitä ja -tuokioita, joilla erityisesti asiakaspalvelusta voidaan saada entistä käyttäjäkeskeisempi ja näin saada entistä sitoutuneempia asiakkaita. Tässä opinnäytetyössä käytettyä menetelmää on mahdollista pienin muutoksin käyttää uudelleen ja kehittää näin yrityksen asiakasymmärrystä ja käyttäjäkeskeisyyttä.

Asiasanat: käyttäjäkeskeinen suunnittelu, tulevaisuustyöpaja, toimitusketjun hallinta (SCM), palvelumuotoilu, asiakaskokemus

Laurea University of Applied Sciences **Abstract**
Laurea Kerava
Degree Programme in Entrepreneurship and Business,
User-Centered Design
Master of Business Administration

Mia Pyykönen

The Secret Recipe for Future Supply Chains: The Silent Voice of the Customer
Case: Freight Forwarding Company X

Year 2013 Pages 51

This master's thesis studies possibilities of future workshop in identifying the shortcomings and improvement possibilities of Freight Forwarding Company X's product portfolio and customer service. This research is done as an assignment to Freight Forwarding Company X which is a world-wide operating logistics group offering a range of services varying from pure air and ocean freight transportation to logistics value-added services.

The purpose of this study was to understand if a future workshop, on one hand would help to understand the deficiencies of Freight Forwarding Company X's current operations from a customer's perspective, and on the other hand, brainstorm together with customers what could be done to overcome these problems. The ambition was to see if this kind of workshop could help bring out new service innovations. Based on the results, the goal was to improve customer´s service experience and make it as pleasant and smooth as possible.

The research was done by using qualitative methodology from the world of user-centered design. The chosen method was a future workshop because it suits well situations where the participants have little experience creative decision making. The participants represented four customer enterprises which were located in the capital area and who all had used Freight Forwarding Company X's services frequently during the last year. The participants had to have decision making power in regards to transportation sourcing decisions. The customer choices were made together with the management of Freight Forwarding Company X.

The theoretical framework consists of service and service design and user-centered design theory. Out of the wide variety of user-centered design methodology focus was put on explaining the dynamics of future workshop. Supply chain management from international transportation perspective was introduced in order for the reader to better understand the business context.

Based on the research results it can be argued that the future workshop was successful and it helped to surface deficiencies related especially to the IT infrastructure and the lack of flexibility in customer service. Customers put a lot emphasis on the capability to offer comprehensive and cost-efficient transportation solutions; they also stressed the fact that the visibility through the whole transportation chain has to be improved a lot. The results also indicated that customers prefer buying services from a company which can offer the variety of transportation services used by the customer company.

The research results brought up service gestures which could help to make the service experience more user-friendly. The method used in this research can be used again with minor changes and thus enhance the company's customer understanding and user-friendliness even further.

Keywords: User-centered design, future workshop, supply chain management (SCM), service design, customer experience

Table of Contents

1 Introduction

Nowadays many businesses and companies praise a customer focused approach. In reality, customers may be put as a focus point in the corporate strategy but how many companies know how to execute a customer focused approach within their country organizations for real? I dare to say not many, not because we would not have capable managers to lead people towards the right direction, but more because it is not that easy to put the concept of being customer focused from theory into practice. Executing a customer focused approach requires more than incorporating the word into the quarter or annual reports – it requires understanding more about your customers' experience on the company's current service offering and customers' expectations for the future. Once the understanding is acquired, the collected information would have to be put in to practice. The term customer focused can also mean different things to different people, which is why an understanding and a consensus within the company is needed to be found first. Important is to notice that it is not necessarily easy to find out how customers perceive your current service offerings and what they want from the future. It might be that they themselves do not know how to put it into words. In general one could say that being customer focused requires understanding people. In logistics it requires not only understanding people but also their role in the supply chain. Understanding customers better will not be achieved by conducting customer surveys; it will be done by learning from and with your customers. The first structured attempt of Freight Forwarding Company X Helsinki is the present study.

1.1 Overview of freight forwarding industry

This research is done as an assignment for Freight Forwarding Company X. Freight Forwarding Company X is a world-wide operating logistics group offering a range of services varying from pure air and ocean freight transportation to logistics value-added services. Freight Forwarding Company X is established in more than 80 countries and employs close to 15 000 people worldwide. In Finland the company has an office in Vantaa near Helsinki-Vantaa airport employing close to 30 people. Freight Forwarding Company X office in Finland was established in 1995.

Freight Forwarding Company X is a member of Finnish Freight Forwarder's Association (Suomen Huolitaliikkeiden Liitto) but in general it is rather difficult to find any key statistics from the size of the industry in Finland. The association maintains a membership list and the purpose of existence is to monitor the interests of the industry, promote co-operation and provide information and training to the member's operating in the forwarding business. The Association also represents its members in the International Federation of Freight Forwarders Associations, FIATA. Finnish Customs publishes transport statistics of the size of foreign trade

by industry and country. In year 2012, the size of foreign trade for imports was 55 934 and for exports 42 951 tons. Out of total size, not all transportation is handled by the members of the Finnish Freight Forwarder's Association but it gives a tendency of the potential size of business. Also Statistics Finland (Tilastokeskus) publishes statistics which cover all import and export and indicate the monthly values of import and export and trade balance of Finland. Principally, all goods exported from and imported in Finland are recorded to statistics. An inclusion in these statistics requires the goods physically arrive in or depart from this country. (Suomen Huolintaliikkeiden Liitto 2013; Tulli 2013; Tilastokeskus 2013).

1.2 Selection of research method

Prior to this thesis, Freight Forwarding Company X had not used qualitative research methods to study customers. The details of the case background are described in chapter 3. In general one can say that by conducting quantitative research, companies can gather large amounts of data fast and with very low costs. This is probably one reason why the usage of quantitative methods is still very popular even though the data received out of the research can many times be disappointing. As quantitative research methods do not penetrate deeply below the surface, they rarely reveal information which has real novelty value. It is also difficult to estimate the reliability of the data as it is depended upon the motivation and activity of the interviewed person. One challenge with qualitative research, and in particular user-center design methods, is that the planning and pre-arrangements take a lot of effort from the organizer which is why it is often difficult to get the management of companies to approve usage of such methods when studying customer satisfaction even if they are interested to hear and learn more about the needs of customers. (Mattinen 2006, 47-48.)

Since qualitative research methods are founded upon conversation, they are very good in getting deeper information on why the customer is not satisfied or why the customer‘s service experience has failed. The structure is usually fairly adaptable which enables the facilitator to direct the conversation. This requires an experienced facilitator who is sensitive to the interviewees' signals. Qualitative research can reveal the gaps in the service process, or provide better understanding about customer experience. Sometimes qualitative research is conducted to explain the findings of quantitative research and thus it can bring added value to quantitative research. It could be said that quantitative research methods are good to answer questions such as "what and how something has happened" when qualitative methods could be used to find answers to questions "why something has happened" or "has something which we do not know yet happened". Qualitative research is perceived as more difficult to conduct as it requires time and is more expensive than quantitative research. There are several types of research methods in both quantitative and qualitative group which will not be analyzed in this study. This thesis represents qualitative research based on discretionary sampling which

is very common for qualitative research in general. There is no intention to try to any statistical generalizations with the research results. The chosen method future workshop will be explained in detail in theoretical framework chapter. (Eskola and Suoranta 2008, 18; Mattinen 2006, 47-50; Tuomi and Sarajärvi 2009, 85).

The freight forwarding companies have traditionally been seen to operate in a rather conservative business environment. Therefore this research will not try to change the whole industry at once, but rather open the door for new ways of listening to customers and involving them into the service design process. This research is conducted by using a user-centered design method called future workshop which was developed by futurist Robert Jüngk who held the first workshops in Wien in 1950s'. Future workshop is a method which was born to enable people to develop solutions or new ideas to social problems and it is particularly suitable for participants who have little experience with processes of creative decision making. (Kiimamaa 2003,11). Jüngk's statement: "suitable for participants who have little experience in creative decision making" along with the conservative nature of freight forwarding industry are the main reasons as to why this method was chosen. Neither the management of Freight Forwarding Company X nor the invited customers had previous experience in utilizing user-center design methods. This method was chosen to see if it could be used as a new and innovative way to learn from customers using freight forwarding services in Finland and have them participating in the service improvement and design process to better meet their needs and make the offered services as user friendly as possible.

1.3 Purpose of the study

The purpose of this study is to understand if the selected user-center design method, "future workshop", on one hand would help to understand the shortcomings of Freight Forwarding Company X's current operations from a customer's perspective, and on the other hand, brainstorm together with customers what could be done to solve these problems. The ambition was to see if this kind of workshop could help bring out new service innovations. The workshop included a review on Freight Forwarding Company X's core product portfolio (airfreight and ocean freight), overall competitiveness and reliability of Freight Forwarding Company X sales and the administration and general management of the named customer account. The ultimate target is to improve customer´s service experience and make it as effortless, smooth and pleasant as possible.

The research is unique in the sense that the freight forwarding companies operating in Finland have not utilized user-center design methodology when studying customer satisfaction levels nor has the methodologies been used to innovate new services. Also for Freight Forwarding Company X Northern Europe, the study is unique. The usage of qualitative research

methods in the freight forwarding industry has not been widespread. Theme interviews seem to be the most commonly used like in the case of Andersson (2011, 9) who studied weather the airfreight forwarding can be considered as a value added service or just one step in the international transportation chain. Helenius (2009, 29) used Michel Porter's value chain theory to ponder upon freight forwarders' role in customer company's outbound logistics. Laitine's (2002, 16) Master of Science theses on international airfreight services in Finland was explorative and his research also noted that scientific research in freight forwarding world has not been conducted a lot.

The study is important for Freight Forwarding Company X because of the fact that the company, and the whole freight forwarding industry for that matter, has been living turbulent times ever since the economic down turn in 2008. The industry is going through a fundamental change which will have long terms effects on the future of freight forwarding in general. The change is multi-layered and it involves not only an information technology revolution which enables a more efficient business environment but also a reinforcement of the importance of customer insight. The knowhow of user centered design methods is important considering both topics. Freight forwarding companies are only one link in the life of multinational companies' complex supply chains. Any freight forwarding company, no matter asset heavy or light is depended on partners such as airlines or shipping lines which also are facing the changes due to the shift in global trade and power relations from mature economies to developing countries. Also the financial crisis has put pressure on the industry as consumer confidence in Europe, and also in the United States to a certain extent, has decreased which keeps off people from spending which again has an effect on operations of airlines and shipping lines through the profitability of the business. Therefore, it is now more important than ever to put the customer in focus. The companies, who are able to understand and interact with their customers, will be the winners of tomorrow in the ever changing and very competitive environment.

1.4 Research questions, topic and research goals

The research question can be defined as follows:

- Can something be learned from customers by using future workshop method which would help to enhance the customer service experience and make it as smooth, effortless and pleasant as possible?

- Can the usage of future workshop bring along new ideas, innovations, which could be useful for Freight Forwarding Company X?

The research material was collected in a workshop which was arranged for the customer contacts 17th of March 2011 at 10:00 in the morning. The research material was analyzed by the thesis writer after which the results were gone through with the management of Freight Forwarding Company X right after the workshop was conducted. The workshop process and results will be explained in more detail in chapter 6.

2 Theoretical framework

The theoretical framework is built on literature about services and service design, definition of user-centered design and formation of customer/user experience. From user-centered design methods focus is put on the future workshop method which is used to gather the information for this research. Also the concepts of supply chain management (SCM), forwarding services and transportation will be explained on a high level in order for the reader to grasp the case context.

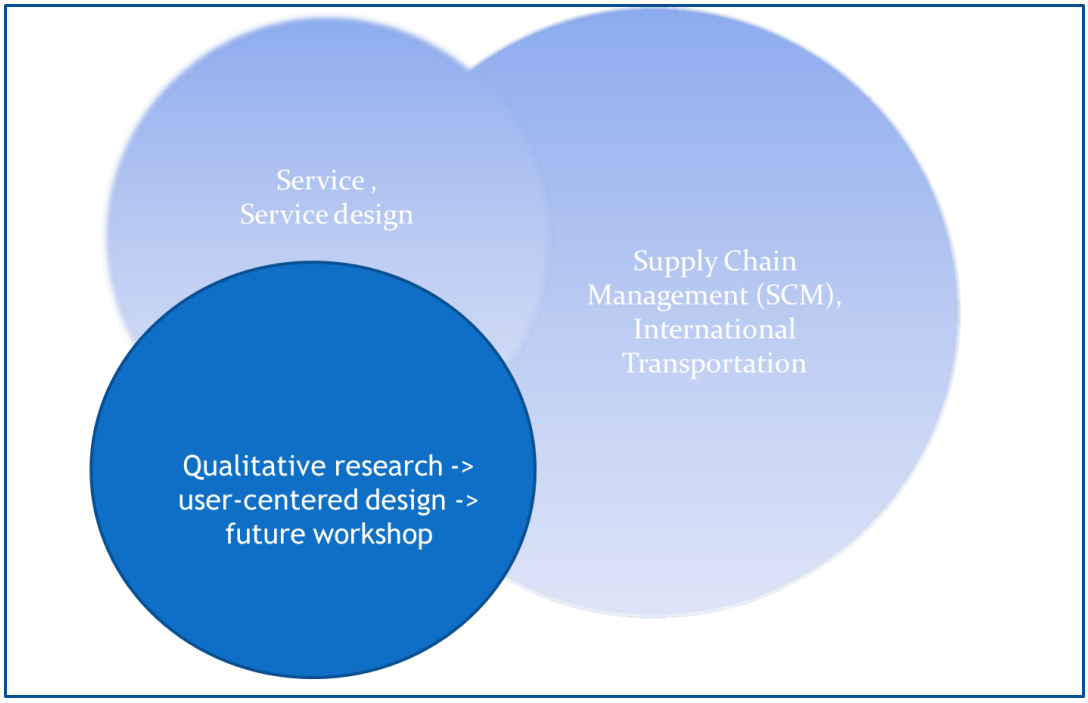


Figure 1. Theoretical Framework.

It is important for the reader to understand that common denominator for both service design and supply chain management is people who are at the heart of both concepts. Even in the industry itself, too many people see supply chain management only as a chain of processes and it is this thinking which needs to be eliminated in order to enable change towards a more customer friendly and innovation encouraging environment.

3 Qualitative research

Qualitative research cannot be unambiguously defined. No theory or particular set of methods are connected with qualitative research solely. It is justified to use qualitative research when one is interested in specific events in detail or natural situations are wanted to be studied which cannot be arranged in an experimental environment or where one cannot control all factors affecting a specific situation. The most commonly used methods in qualitative research are observation, text analysis and interviews. Due to its relevance to this study, case study, which is a typical information finding method in qualitative research, will be described in more detail below. (Metsämuuronen 2005, 198 and 203-205).

Almost all qualitative research involves case studies. Case study attempts to gather a comprehensive amount of data in many different ways. It is typical for case studies that the gathered material can be considered very true but at the same time it is very difficult to organize. The output of a case study is an archive of material which is descriptive enough so that one, also readers, can make interpretations out of it. Case studies are a step towards action and many times the starting point of a study is functional where the results are also applied in practice. The question: "What can one learn from one case?", describes the nature of case study very well. Case study allows generalization. (Metsämuuronen 2005, 205-207).

3.1 User-centered design

The term User-Centered Design (UCD) is relevant to this study and thus it is important to clarify how it is interpret in this context. In short, user-centered design could be described as product or service design where the user of the commodity is in the center of the design process. The term user-centered design is ambiguous and it can be interpret from many aspects. The methodology originates from 1950's cognitive science and through 1970's it evolved through participatory design being used for example in designing of work ergonomics. The information technology revolution in 1980's brought about the terms user-centered design, user interface and usability. There are numerous techniques and process models which can be considered as user-centered design methods. The bases for majority of the methods are interviews, observation and self-documentation. (Keinonen and Jääskö 2003, 80 and 92). In order to use consistent terminology, the term user-centered design was chosen to be used in this thesis. In order for the reader to understand, who a potential user of Freight Forwarding Company X's services, see chapter 3.4.

ISO 13407 standard sets a prerequisite to user-centered product (or service) development / design process. Everyhitng starts by defining and understanding the possible user and product usage and environment. After this is done, the requirements of the users and organization are

needed to be defined and mapped after which the product is refined so many times that the organization and user are satisfied. (Hyysalo 2009, 62.)

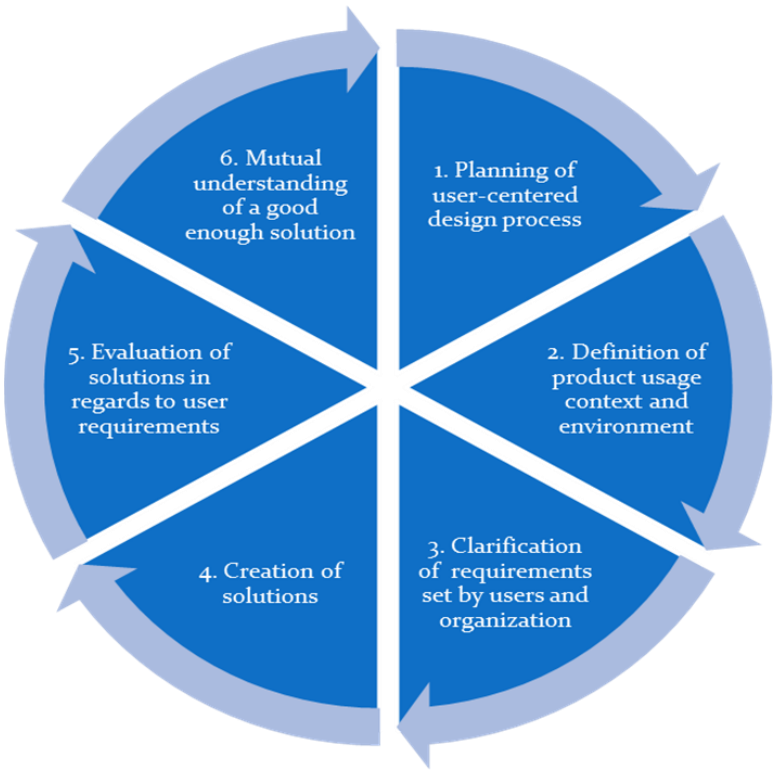


Figure 2: User-centered product development process: ISO 13407 standard. (Adapted from Hyysalo 2009, 62)

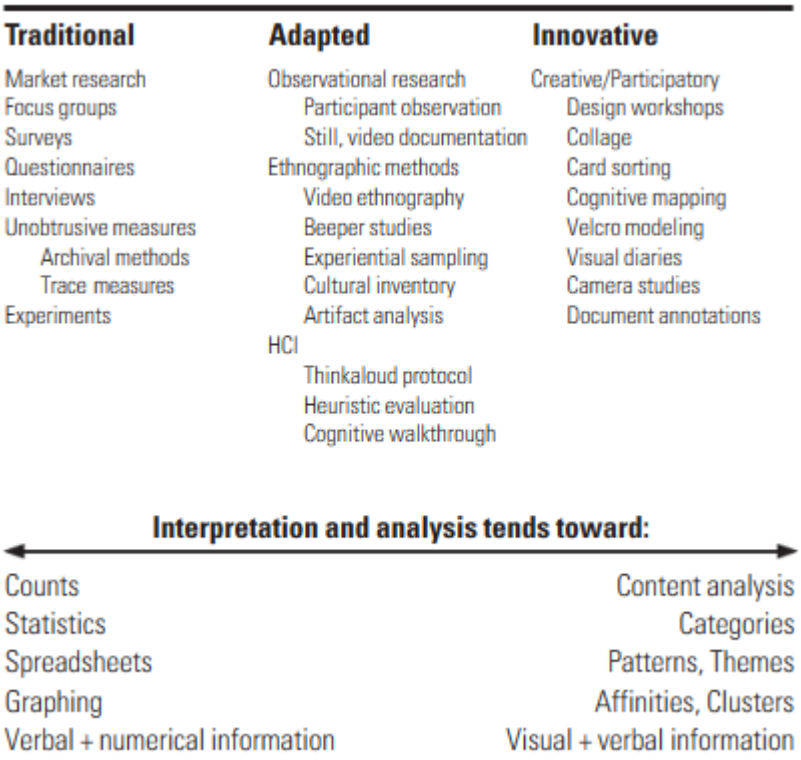
The standard was improved in 2010 after which is called "Human-centered design for interactive systems". The key difference to previous definition is that the new standard describes the iterative nature of the product development. If the solutions are not satisfactory enough it is important to check if first the definition of usage context and environment was successful and secondly if the requirements of users were well understood. After this has been done, the development process can continue from which ever step of the process. (ISO 2010).

3.2 User-centered design methods

Hannington (2003, 9) has tried to categorize the different user-centered design methods and thus make the term and concept easier to comprehend. As he aptly points out, the term user-centered design is lacking the word research. In this case the word research is implicit as it is addressed within the context of design. The word design includes the human aspect by addressing human needs and concerns. In other words, user-centered design portrays a process which is both human- and design-centric. Hannington (2003, 10) suggests to humanize the concept by calling it human-centered design. Also the term interactive design is being re-

placed by user experience (UX) design where the participation of user in the design process is key.

Hannington (2003, 12-13) divides the user-centered design methods into three categories (Picture 1) which are traditional, adapted and innovative methods. Traditional group contains methods such as surveys, interviews, questionnaires and focus groups which can serve their purpose well if they are structured effectively. These methods are good for gathering large amounts of data as they can easily reach numbers of people. The criticism though is if people really say what they really mean as people have a natural tendency to say what they think the researcher wants to hear and therefore, one could argue if the data gathered is reliable and unbiased. In many cases the usage of traditional methods usually confirms what is already known rather than reveal new, undiscovered information.



Picture 1: Differentiation of user-centered design methods (Hannington 2003, 13)

Adapted methods are literally adapted from traditional branches of science to better suit the goals, purposes and overall need of design. Methods are borrowed from human research, mainly psychology and philosophy, which makes sense since design is a human-centered activity. Observation was used first but quickly followed by anthropology and ethnography after a growing consensus that people need to be studied in their natural environments at home, work or play, was borne. “Thinkaloud” protocol, literally have participants thinking out loud

when navigating through problems, is originally by human computer interaction research community. (Hannington 2003, 14-15).

Innovative methods have usually a participatory nature and they are used to collect user information through creative means. The usage of innovative methods might reveal needs and desires which are unknown to the user itself as they are difficult to articulate to a survey. Innovative methods could include participating in a design workshops where user could be wheedled into compile collages detailing preferences or feelings, cognitive maps or other diagrams indicating sequences of activities, actions, or thoughts, models configured to represent desired product features or forms. The participant (user) might be asked to fill in a "diary" at the selected place and time and send back the handwritten notes up with photographs or drawings. Existing visuals and documents may be annotated using colored Post-its or highlighter pens. The above are just a few examples on what innovative methods could be. There is no complete list available because the whole purpose of these methods is to put emphasis on creative. This means that the innovative methods develop according to the situation they are used in. Innovative methods are at best when being used at early stages of product or service design. (Hannington 2003, 15-16).

Usage of innovative methods should also be seen as a structured approach to drive innovation. The word innovation has numerous interpretations but according to Kumar (2013, 1) "Innovation is a viable offering that is new to a specific context and time, creating user and provider." Kumar (2013, 3-7) identifies four core principles of successful innovation. First principle is to focus on building innovation around user's experiences, which is exactly the opposite of what most organizations are doing today. Organizations focus too much on their current offerings, which could be products or services, and why and how customers purchase them. Typically companies conduct market research by utilizing surveys, focus groups or usability tests which means that any innovations which might come out of the studies, focus on the offering itself. Experience-focused innovation puts emphasis on the users and their behaviors, activities, needs and motivations. Organizations should extend the view of monitoring pure product or service performance to understanding its users' motivations, needs, and beginning-to-end experience. Understanding the extended experience can lead to innovations. The second principle is to see innovations as larger systems of which a classic example is Apple with its iPod and iTunes, iPhone and iPad and the App Store. Offerings naturally belong to a larger system of offerings, markets and organizations. Seeing innovation as system level can be revolutionary because when it is understood how systems function, better offerings with value can be created. Third principle for driving innovation is cultivating an innovation mindset among the organization. No matter the organization level, everyone should actively be engaged in innovation on daily basis. Innovation practice is collaborative by nature and people from different fields of expertise need to come together to make the process thorough, inclu-

sive, and valuable. Reaching this level of collaboration involving even users is a challenge, but even small steps can lead to big positive changes. One such step is to conduct frequent interactive sessions and brainstorming activities among people with diverse expertise and thus allow them to share the same mental space. Principle four in embracing innovation is to adopt a disciplined innovation process. Organizations need to realize that innovation should be planned like any other organizational function. Innovations can be created by using well-developed processes and repeatable methods, all in the three principles of successful innovation – understanding experiences, thinking in terms of systems, and fostering innovation culture.

Regardless of the chosen method, traditional, adapted or innovative, the collected material might come in unconventional formats such as sketches, diagrams, maps, models, photographic records, and videotape. Color-coded documents could be compiled and differentiated between key problem areas and points of success. Research results should be further discussed in a forum where they are open for iterations of debate, development, and testing. The gathered data is rarely useful as collected. The data should be structured into emerging themes, patterns, or clusters of affinitive information. This puts the data into a more understandable format after which it can be evaluated and stored for further use. The most known grouping techniques are probably affinity diagramming and language processing where all key elements are grouped based on data cohesion. (Hannington 2003, 16-17 and Keinonen and Jääskö, 2003, 95-96).

3.2.1 Future workshop

The future workshop method was originally designed by a German futurist Robert Jüngk in 1950's in Wien, Austria. Residents of the city asked Jüngk's help when communal decision-makers had decided to build a motorway through the town which meant that certain residential buildings and houses needed to be demolished. Jüngk motivated the community to discuss about their needs and desires which were document to build up a strategy in order to change the decision-makers minds. Future workshops were originally used by communities to help solve problems or to find alternatives for current way of doing things. Target of a future workshop is to find out the problems and possibilities of the researched topic. The participants are seen as the experts of the researched field whose opinions are crucial for future strategy selection. The basic idea of a future workshop is to gather together people who share a same interest or a problem to which solutions are needed to be found. The purpose is to activate people in matters that affect them. (Kamppinen, Kuusi, Söderlund 2002, 907 and Rubik 2012).

Future workshop traditionally consists of three phases even though nowadays there are many variations and lengths of future workshops: a future workshop can last from hours to days or even from weeks to months depending on the subject. Traditionally future workshops are run by one or two facilitators with no more than 20 participants. A larger number of participants might have a negative effect on the equal participation of people during the workshop. On the other hand a too small of a group cannot necessary deliver the needed versatility and different points of view. There are three phases for a future workshop: criticism, imagination and execution phase. Results of the previous phase are always the start for the new phase. Prior the actual workshop phases, the facilitator should decide on the theme, venue and date and time for the workshop which includes informing and motivating the participants well in advance and gathering the right material such as video camera, pens and post-its. (Kiimamaa 2003, 11-12 and Rubik 2012).

Criticism phase starts by carefully analyzing the problems of the chosen theme. It is important to remember that at this stage, the participants should not seek for solutions yet but only be very critical when evaluating the present situation. The projected themes should be written down as keywords or short phrases after which they can be arranged according to subject matter. Participants should select the most important subjects for further consideration. If there should be any disagreement between the participants when selecting the themes, the facilitator can arrange a voting on it. In the future workshop, everybody can present their own opinions and the proposed settlement. Imagination phase starts by brainstorming solutions to the points which arose during criticism phase. The facilitator should motive the participants to get involved in the conversation and underline that all possible ideas and solutions are allowed even if they seem unrealistic. One way of finding solutions is to turn the keywords / sentences of the criticism phase to positive declarative sentences. As an example, key sentence could claim that “Freight Forwarding Company X is not able to provide trucking to all needed destinations”. This could be changed to “Freight Forwarding Company X’s trucking network is extensive enough to cover the needed destinations”. Similarly to the criticism phase, all ideas are collected as keywords or sentences to a board and specified as imaginary themes or plans which will act as a basis for the execution phase. Goal of the last phase, execution phase, is find solutions which enable immediate realization of the plans of criticism and imagination phases. Future workshop can also be continuous where the phases are repeated over and over again until a solution is found. (Kiimamaa 2003, 12-13).

Future workshop works best when used the beginning of a design or development project which is usually also the most crucial phase of a project. In this phase it is important to formulate and find the questions answers are needed for. The prevailing situation needs to be analyzed in order to find pros and cons of the present situation. During the evaluation it needs to be decided what features are wanted to be kept the way they are at present and

what needs to be changed. Future workshop is a tool where the participants' opinions are well heard and everybody can influence the content of the discussion. A future workshop is intended to work like a think tank which can even bring along so called "weak signals" of a bigger need for change. It has also an empowering effect on people as the purpose is to have everybody's voices heard – also people who are left aside of decision making can have their voices heard. (Kiimamaa 2003, 11-12 and Rubik 2012).

Future workshop can be considered as an easy methodology to deploy as it does not require prior knowledge on futurology or qualitative research. Future workshop is a means for social learning as it also teaches the participants along the way. At its best it can help to build integration between communities and organization or a sense of intense collaboration between organizations and its customers. Future workshop can be considered as a success if it increases the participants self-confidence, brings hope for a better future, belief in the ability to affect decisions and pleasure of doing together. Future workshop can also be used as a strategy building tool in organizations to help build the vision and a mission. (Rubik 2012).

3.3 Customer and user experience

When defining user experience (UX), one first needs to define who the user exactly is. In case of Freight Forwarding Company X, the users can be segmented in different hierarchies who usually also feedback one another based on the successfulness or unsuccessfulness of the rendered services. Freight Forwarding Company X operates in a B2B (business to business) environment which means that the customers of Freight Forwarding Company X are also the users which is usually not the case for a company which produces products or services to consumers. The users of Freight Forwarding Company X's services can typically be transport or logistics coordinators, logistics managers or sourcing managers for example. Depending on their position, they deal with different levels of Freight Forwarding Company X's employees. The most of the users interact with the sales or customer service personnel which is why these were also put in focus in this research.

The same definitions and processes apply for customer experience (CX) and user experience (UX). Schmitt (2003, 17-18) has developed a comprehensive customer experience management (CEM) concept to help strategically manage customer's entire product or service usage experience with a certain company. The construction of customer experience comprises all aspects of company's offering not only the nature and features of product or service but also the quality of customer care, advertising, packaging, ease of use, and reliability. Customer experience is the inner feeling of a customer and subjective to customers' personality related to any any direct or indirect contact with a company. Direct contact generally occurs in the course of purchase use, and service and is usually initiated by the customer. Indirect contact

most often involves unplanned encounters with representations of a company's products, services, or brands and takes the form of word of-mouth recommendations or criticisms, advertising, news reports, reviews, and so forth.

3.4 Customer / user data – collection and interpretation

There are a lot of customer data available in companies. Customer data is usually feedback from customers in terms of returns, reviews or bought quantities. The problem usually is that the information is produced in silos and the collected data it is not systematically passed on to other business lines or departments. It is mostly the marketing and sales department which gathers large amounts of information related to the customers but they are usually used to take care of or improve one single customer service situation. Companies need to develop processes to first gather and make use of the customer information systematically. There is a lot of tacit knowledge especially in the frontend facing the customer, customer service personnel, but there is no good way to pass on this information to marketing and sales. It is also noticeable that a lot of the feedback given for surveys comes from people who had a very strong reaction, good or bad, to the product or service and leaves out completely the emotions in between. This type of feedback does not give the right impression of the product or service usability. (Arantola and Simonen 2009, 7 and Hyysalo 2006, 7-8).

The key success factor in research and development (RandD) is how to collect information related to the users. In the case of Freight Forwarding Company X, customer and user data can be perceived as the same even though this does not apply in most companies. In theory the collection of user information may seem simple and the answers even more simple but in practice the question is a bit more complex. Hyysalo (2006, 2) gives an example that close to 46 % of all RandD costs of a company are used for projects which were cancelled or not profitable mainly for the reason that these companies have not taken the user's needs into account when planning to product or service. In user-centered design the goal is to get close to the user and thus open up his world of ideas and values in context to his physical environment and behavior to the researcher. A large sample size is not the key – only 4-6 is enough if they represent the same user group. (Hyysalo 2006, 7-8 and Keinonen and Jääskö, 2003, 91).

4 Supply chain management - living supply chains

Chopra and Meindl (2004, 4-6,) simplify the concept of a supply chain by saying that a supply chain includes all functions in receiving and filling a customer request. Supply chain is dynamic and involves a constant flow of information, product and funds between different functions which could include, but not limited to, operations, distribution and customer service. According to this definition, the main focus in the supply chain is the final customer as the chain

starts with a customer order and ends when the customer has paid his or her purchase. The primary purpose of a supply chain is to satisfy the customer.

Gattorna (2006, 2-3) extends the view of a supply chain by saying that a supply chain is no longer all about the hard assets utilized in the chain, for example the transportation gear or technology, but it is also the soft factors that matter which by the way are, more than often, non-measurable with any indicators. Supply chain needs to be seen as a combination of processes, functions, activities, relationships and pathways along which products, services, information and financial transactions move in and between enterprises. Many service organizations suffer from supply chain blindness which means that since the products are intangible, logistics and supply chain principles do not apply. They do apply but reducing the internal complexity, which is often the answer for trying to make the chain more efficient and cost effective, is not necessarily the answer. All re-engineering processes and new technology might help to a certain extend but ultimately the key is to admit that supply chains are complex but still manageable. Supply chains feel uncontrollable and complex because they are living systems propelled by humans and human behavior. Understanding logistics only as infrastructures and operations-based business only leads to operational excellence mentality, which undoubtedly is a good thing, but should be seen in context with the fact that managing supply chains involves understanding the interaction between human behavior, information technology and infrastructure. (Gattorna 2006, 3-8).

4.1 The role of transportation and logistics activities in a supply chain

Transportation refers to product or supply movements between the different stages in a supply chain. Transportation has played an increasingly significant role in supply chains after the start of globalization. The reason behind this is that nowadays, with the movement of production to low cost production countries, the goods are rarely produced and consumed in the same location. Due to increased distances, transportation is a major cost factor in today's supply chains and any supply chain's success is closely linked to success of transportation. Transportation is the means of linking different stages of supply chain closely together. The word linking is important here – linking different stages of a supply chain is something that is mostly done by people with the help of technology. Gattorna (2006, 9) emphasized the fact what people, and soft assets of human behavior and knowledge, are the driving forces of a supply chain. Only a small body of knowledge goes beyond the hard assets of a supply chain – systems, infrastructure and equipment. Building a more responsive supply chain means building a more responsive enterprise overall. Services mean different things to different people, and customers do not split hair between functions inside the enterprise. (Chopra and Meindl 2004, 412-413 and Gattorna 2006, 25).

5 Definition of service and service quality

There is clear distinction to be made between designing products and designing services. Treating services like products sets the services to underperform and disappoint since service quality issues cannot be fixed the same way as problems occurring with products. Services are about interactions between people, and their motivations and behavior. As an example: a smartphone does not worry about how to pay next month's rent but people do, which is why understanding people is at the heart of service design. Services are everywhere and they have become an integral part of the modern world. Services can be defined in many ways and undoubtedly none of the definitions are exhaustive. According to Grönroos (2000, 47-55) services are a series of processes, more or less intangible, which normally take interactions between the customer and the service employees or physical resources or goods or systems of the service provider, which are provided as solutions to customer problems. A service has three main characteristics: Firstly, services are processes consisting of activities. Secondly, those services are to some extent produced and consumed simultaneously. Finally, in the service production process the customers have a moderate influence on the process. (Grönroos 2000, 47-55 and Polaine 2013, 19-22).

Services are different to goods by their intangibility, simultaneous production and consumption and heterogeneity. Perhaps the most defining characteristic of service is intangibility – they cannot be touched, seen or held anywhere. Services are processes that are experiences and as Schneider and White (2004, 5) condense the message in their book: "Services yield psychological experiences more than they yield possessions". Many products have both a tangible and intangible aspect in them, for example when purchasing a mobile phone, people purchase both a physical device and the user experience when using the phone in their daily lives. This is the reason why every organization should be interested in service quality and delivery. In some cases services are produced and consumed at the same time which is called relative inseparability which means that the process cannot be separated. It means that no quality controls can be done prior to consuming the service. Also an interesting feature about inseparability of services is that organizations must drive to ensure that, when services are produced, the maximum number of people is available to consume it. For example airline frequent flyer programs exists to serve this purpose as any seat not filled will never exist again, it cannot be inventoried for later use. Yield management, also known as revenue management, was developed by operations management for dealing with these kinds of issues. Since humans, mostly customer service personnel and customers, are involved in service production, it leads to the fact that no two service instances are similar. Different customers have different demands to be met and customer service personnel might fulfill even the needs of the same customer differently at different points in time. For example, within cus-

tomers using forwarding services, one might need ocean expertise, other one airfreight import related services and the last one warehousing. However, they all are consuming services related to freight forwarding and they all are likely to have different set of demands, expectations and desires and the customer service personnel must always adapt to the needs. The human interaction makes services heterogeneous by nature which causes the fact that services are difficult to measure and do quality-control checks especially ahead of time. (Schneider and White, 5-9).

Grönroos (2000, 47-54) explains that further services are normally perceived in a subjective manner as can be described by customer with such words as experience, trust, feeling, and security. Nowadays, customer services have become a major matter as they help to keep business operations actively. Currently the main view is that companies are more interested in service management in order to gain competitive advantage.

Similar to services, also service quality can be defined in many ways. Quality could be looked at from a philosophical perspective by saying that quality is an attainment of superiority and it cannot be defined further than that. A technical definition looks quality from an objective perspective by defining that quality is when a product fills certain technical standards. More relevant to this study is the user-based approach in which the quality is determined by the user. The user-based view is relevant when defining service quality because of the nature of service delivery. This definition is subjective like is the perception of quality which is borne in customers minds. There are several service quality models, for example SERVQUAL, developed by the service research community which will not be gone through in detail. These models sound common themes which emerged in early qualitaty service research and how customers evaluate service quality in general. These themes include tangibles, reliability, responsiveness, competence, courtesy, credibility, security, access, communication and understanding the customer. SERVQUAL is a survey measure designed to collect data on these dimensions. (Schneider and White, 10 and 31).

In freight forwarding, the services process include many elements which include the sold/bought service itself (could be transportation, warehousing), the infrastructure used to render the service (planes, ships, trucks, IT), the communication to external service providers and finally the customer service person facing the end customer.

5.1 Service design

Service design is a fairly new concept, which has been known as it is today, since the early 1990's. Since the service industry began growing with a fast pace and because the require-

ment became more challenges to meet, there was a clear need for service design and the facilitator for fast growth was the easy access to information and tools over the internet. The roots of service design are European. Among the first person's to promote and talk about service design were professors Michael Erlhoff and Birgit Mager from Köln International School of Design (Tuulaniemi 2011, 62).

The term service design gives a frame for service development. Service design development is part of the larger democratization of design where companies are questioning the stiff way of product or service development. Today's forerunners are giving tools for the customer's use where they can combine services to their own service concepts and design their own services. The main idea is that the customers are incorporated really in the design process and they can take accountability for their actions. Where there is genuine insight of what matters for the service users, there can be confidence that real value is delivered. When services are designed with resilience and consistency, the human experience will be satisfying. Service design critics can argue that it is easy to study how people experience a service and based on the results; improve the parts which are not working. In reality, it is not that easy and many companies find it difficult to design services well. This is mostly due to the nature of services and how they are delivered. (Polaine 2013, 17-19 and Tuulaniemi 2011, 68).

5.1.1 The meaning of service design for business

Service is a process where the end result is a service. Service design is process development where the focus has to be on the service user. Services are produced and used in a complex ecosystem which consists of physical and virtual environments, systems (software) and interaction between people. Service is an interactive process between the service provider and the customer. To be successful in this process, a company or individual must have customer understanding which is achieved by anticipating the needs and motives of the customer. When designing a service, the understanding of the complete process and how different services are interconnected is a must because usually services are consumed at the same time with other services (Tuulaniemi 2011, 64-67).

In the center of service is the user of the service which is most cases is also the customer. Service consists of the customer, customer service personnel and the service itself and these together form the customer experience or user experience. The key is to understand both customers' needs and the service providers needs and get to know all the elements of service in detail. It is crucial that the service providers understand that the reality where their customers live and work in. The companies must know their customers motives and where they base their selection on and what expectations and needs they have. It is important to understand which elements the customer values in the service. Examples of these elements could

be needs, expectations, values, habits, other people's opinions, price and elements of the service, the price of other similar services. By understanding the customer the company can develop new service concepts and design customer experiences which can be differentiated from other similar service provider's. When the customer is put into the center, the company is designing services for people who actually use the service. By putting the customer first, the company also minimizes the risk of failure because the service is designed based on the real needs of the customer (Tuulaniemi 2011, 71-72).

How is it possible to put the customer first and design services exceeding the customer's needs? Asking the customer does not give enough in-depth information because rarely the people can tell and express what does not yet exist. This is where user-centered design comes in.

5.1.2 Service design, user-centered design and customer experience

When designing services it is important to understand the concept of customer experience. Customer experience consists of the service and all marketing, sales and contacts before the service transaction takes place. It also covers the quality of customer service, reliability and the user friendliness or easiness to use the service. The formulation of customer experience can be divided into three layers as per below figure.

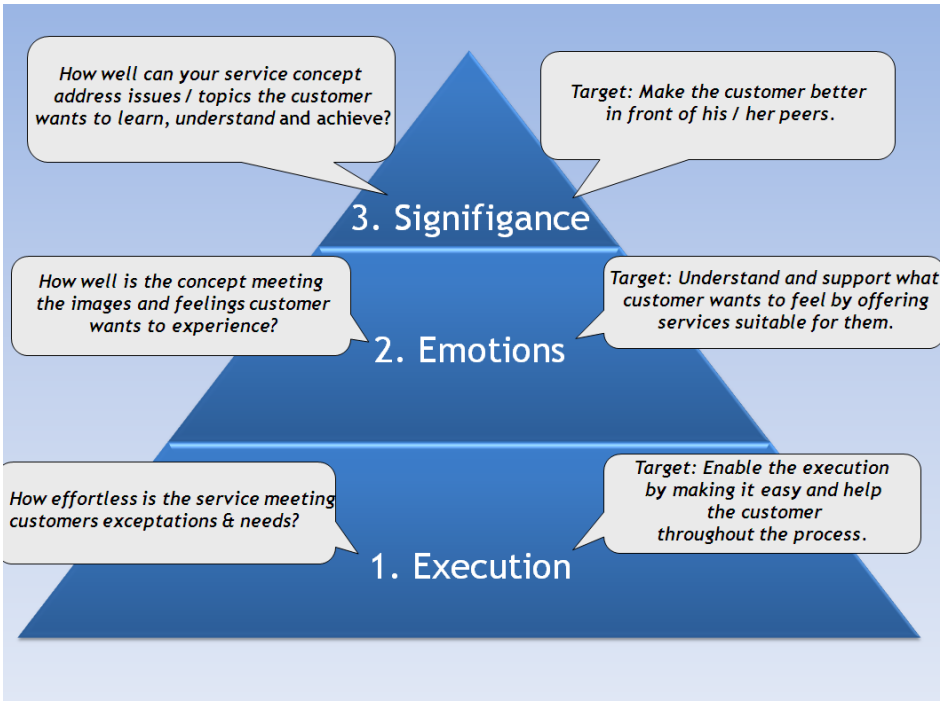


Figure 3: Customer value formation pyramid. (Retelled from Tuulaniemi 2011, 75)

The first level has to be maintained at all times in order for the service to survive on the market. The emotions level describes the feelings borne by the service experience. The feelings are either negative or positive depending on the atmosphere, style, interest level raised and the easiness to use the service. The third level is the highest level of customer experience and it consists of the images, dreams, stories, promises, cultural codes and the connectivity to the customer's way of life and their identity (Tuulaniemi 2011, 74).

One of the center ideas in service design is to make different parties participate in the service development. One of the most important things in service design is to give the participants, service users and service producers, means of developing the service. These means should consist of creative approaches for problem solving, interaction, cooperation, communication and visualization and knowledge and information sharing between the participants. It is essential to understand what the end users' needs are and motives of his / her actions. Involving the end user in the service development enhances the planning, information sharing and value building. Making the different stakeholders participate in the process also improves the commitment to service development and production. It is important to keep in mind that having different stakeholder participate in the design process does not mean that all of them would be involved in the decision making process. The idea is that all ideas and views are taken into consideration in the data gathering and analyzation phase. The design session could be done as group work in workshops or alternatively via virtual channels which allows fast information sharing and commenting of ideas (Tuulaniemi 2011, 117-118).

A good product or service consists of three main pillars as described in the picture below. The product or a service must be workable from a technical or operational point of view, it must be commercially worth the effort and finally it must bring its user advantages and satisfaction. It is very typical that companies do market research to define and determine what is desirable to the customers but this actually serves more general business planning than product or service use or user planning

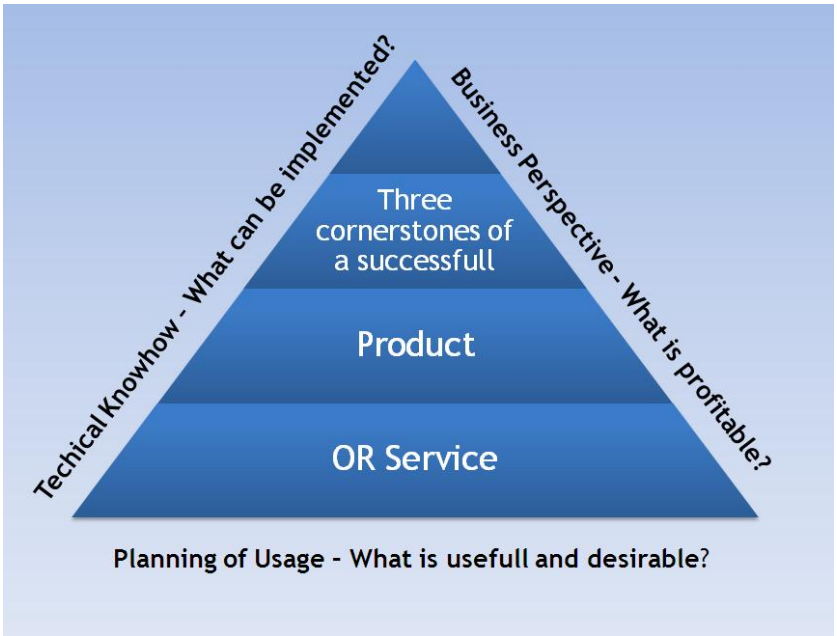


Figure 4. Product Triangle – Three cornerstones of a successful product. (Rettelled from Hyysalo, 2006, 7)

6 Case-study background and targets

The research subject changed many times during the course of this process. The fundamental problem was how to connect the dots between cross-scholarly user-centered design methodology and the concept of supply chain management. The reason why this particular topic was chosen in the end was because it was seen useful to try to understand how user centered design and the traditional, which some could even call old fashioned, freight forwarding world could be combined.

Like described in chapter 1, also Freight Forwarding Company X in Northern Europe Freight Forwarding Company X had previously used questionnaires, or surveys as defined by the company itself, to measure customer satisfaction levels since year 2008. Surveys were sent to a good number of customers based in Scandinavian countries. For example in 2009, customer contact details were collected from a Customer Relationship Management tool and altogether over 600 emails were sent out. The overall response rate was 23 %, Finland having an 18 % response rate. The survey gathered information for example on overall satisfaction, reachability of sales staff, functionality of operations and customer service with numerical scaling reaching from 1-4 and verbal scaling from strongly/fully agree/disagree. As happens in many surveys', also in this case received answers did not reveal reasons for customer's satisfaction or dissatisfaction in detail. Names of those customers answering 'fully disagree' or 'disagree' to the question 'Overall I am satisfied with Freight Forwarding Company X' were acknowl-

edged and followed up 9 months after the survey was conducted and the responsibility to decide on the follow up and actions was left with various business units.

Also in Freight Forwarding Company X's case the survey results were numeric values or averages, and thus it was difficult to understand what is that really makes the customer happy or unhappy or more importantly, what to do if the customer is unhappy. Only through the satisfaction surveys and numeric values it was not possible to describe how customers experience dealing with Freight Forwarding Company X. The customer satisfaction surveys provided basic information: for example if the customer was satisfied or not, level of invoicing accuracy/speed, accessibility of sales/operational staff. Also what was noticed year after year was that the averages did not really improve which lead to the conclusion that the company still had the same problem areas which did not really improve. As a summary one could say that giving a numerical satisfaction rate (e.g. 3.4) does not tell a lot of customer experience and the reason for giving such a rate.

The goal of the company was to find out how customer's service experience could be enhanced and made as fluent, effortless and pleasant as possible. Specific customer needs and wishes have a direct impact on the service experience which is why it was considered useful to come with a clear plan of action on what needs to be developed. Freight Forwarding Company X wanted to portray the message of "caring" to its customers through arranging the workshop and inviting prestigious customer contacts to the workshop.

The workshop idea was to get the participants to participate in the future workshop's two first phases – criticism and idea phase (Picture 4). The third phase, which is the execution phase, was meant to be done with the management of Freight Forwarding Company X Finland based on the most feasible ideas which came out of the future workshop. The results of the execution phase will not be gone through in detail in this thesis due to the confidentiality of the solutions. The future workshop method was chosen in order to collect ideas and opinions from the current service users which in this case are also Freight Forwarding Company X's customers. The risk when choosing this method was that neither the facilitator nor any of the participants had prior experience in attending such a workshop in real-life situation. The facilitator had experience about participating in a future workshop in teaching environment. One risk which was foreseen in advance was the fact that people might not be willing to allocate the time for a purpose where it is vague weather one gets anything out of participating in such an event.

Picture 2: 3 Phases of Freight Forwarding Company X's Future Workshop and Participants on each level

6.1 Execution and user material collection

The research started by arranging a management meeting with Freight Forwarding Company X's country manager and country head of sales to define the list of people / companies which ought to be invited to the workshop. The target was to take medium and / or big companies which work at least on a multinational scale and who have used Freight Forwarding Company X's services frequently during the last one year. The criteria could not be too strict in order to be able to send out many invitations as it was expected that it would be rather difficult to persuade people to participate in the workshop. In total 14 invitations were sent out to 13 different companies on 10th of February 2011 which was 5 weeks before the scheduled future workshop date. None of the invited people responded immediately and therefore a reminder to possible participants was sent 2 weeks prior to the workshop date on 3rd of March. Only 1 participant confirmed the attendance after the reminder and therefore Freight Forwarding Company X's Head of Sales and her employees were all asked to call their customer contacts to get them to participate in the process. Finally 5 persons signed in for the future workshop representing 4 different companies. Due to an illness case, one of the persons cancelled on the day of the workshop but still leaving 4 participants representing 4 different companies which was in total of 30 % of the invited number of companies.

The workshop was recorded with a video camera which was positioned towards the participants so their facial expressions could also be seen. The recorded material was first transcribed after which the transcribed material of 41 A4 strips was used as the main source of information. Also the PostIt stickers used during the workshop were collected to support the analysis phase.

During the time of the study, I was working as a regional key account manager managing one global customer of Freight Forwarding Company X within a certain region and studying user centered design. I had no contact with the customer representatives who were joined the workshop which is why I believe they also felt they could be open in my presence.

6.1.1 Future workshop script

The future workshop was conducted in Freight Forwarding Company X's premises in Vantaa on 17th of March 2011 at 10:00. Present were 4 Freight Forwarding Company X's customer contacts representing 4 different companies working in different industries. All employees were management level and at least influencer level in decision making processes affecting their employers buying behavior. The event was preplanned and scheduled well in advance. The workshop was conducted in Finnish.

The room where participants were directed to was decorated with relevant accessories (airplanes, trucks, ships and company flags) to get the participants in the right mood. Participants were free to choose their places around the table and were directed only not to block the recording camera. The participants were made aware that the session would be recorded already in the invitation itself but an effort was seen to make the participants feel as comfortable as possible even with the presence of the video camera.

The day began by drinking a cup of coffee and biscuits and getting to know one another. Before the workshop started, the facilitator went through a short presentation explaining what future workshop actually is. The theses author was acting as the facilitator and trying to encourage the participants to engage actively in the discussion. This was done by posing as positive attitude as possible, by asking less active participants directly but still not being too dominating overall but more trying to get the conversation to flow among the participants. Approximately halfway through the day, participants were taken out for lunch where the course of the morning was freely discussed. After lunch the workshop ended with a presentation by Freight Forwarding Company X's country manager who presented Freight Forwarding Company X's view on the logistics market and the expected development. The presentation was used to allure participants to the workshop as customers usually are interested to hear logistics service providers' insight on the expected market development. The presentation

ended the workshop around 14:00. The whole process took 4 hours with a 30 minutes lunch in between.

6.1.2 Workshop participants

Company Name	Size (measured by number of employees)	Company Industry	Level of employee representing the company	Usage frequency
Company A	Between 10 000-20 000	Consumer and speciality Packaging	Middle Management Level (Sourcing)	Ad hoc shipments
Company B	Between 50 000-100 000	Automation	First-line Management Level (Logistics Manager)	Regular shipments, big volumes
Company C	Between 5000- 10 000	Security	Middle Management Level (Sourcing)	Regular shipments, high value cargo
Company D	Less than 100	Wholesale	First-line Management Level (Sales)	Regular shipments, small volumes

Table 1: Future workshop participants

The final list of participants was satisfying to Freight Forwarding Company X and matched the given prerequisites. All participants were of first-line or middle management level; however none of them were decision makers but strong influencers. Two participants worked in global companies where the Request for Quotations (RfQ) are usually done centralized maximum once a quarter.

6.2 Data analyzing

Usually the analysis is best to be done by the person who knows the material the best which in many cases is the researcher itself. Analyzing qualitative research material is not as unambiguous as analyzing quantitative material. When conducting qualitative research, data collection and analysis happen partially at the same time. The conclusions are presented on such a generic level that single persons nor their statements or particular events could be identified. Usually the first step is to transcribe the collected data to a format that enables further analysis of the data. There are no clear guidelines from where to start but usually the first question which needs an answer is why the material was collected for, in other words, what was the research question(s). In many cases the target is not only to test hypotheses but also to come with new ones as well. In other words the research data should not restrict the thinking of the researcher but rather speed it up also by finding new points of view from the material. One way to establish a connection to theory is to do analysis based on grounded theory where the aim is to find the theoretical framework from the material. In this case the analysis contains theoretic couplings but is not directly based on any theory. Another possibility is to make use of a variety of theories, previous research results and different concepts. Connecting the empirical observations with theory is usually more difficult when conducting qualitative research because results are rarely unambiguous. Analyzing qualitative data can be

challenging especially if there are different kinds of material available. (Aaltola and Valli 2001, 134-137 and Metsämuuronen 2006, 233-235).

In this thesis a combination of text and discourse analysis was used because both are built upon the same basic questions which described below.

- Who said?
- What did they say?
- What did they mean?
- Why did they say?
- What was the target of saying?
- Who was wanted to be influenced?

(Aaltola and Valli 2001, 134-137 and Metsämuuronen 2006, 233-235).

6.3 Research results

In this study, the research material was collected with video camera and the analysis was done after transcription phase. The researcher was leading the analysis process. After the workshop, also country head of sales and country manager were invited to go through the sequence the PostIt's were arranged in. The workshop was conducted with two colored PostIt notes – pink for the criticism phase and green for the idea phase. The PostIt's were arranged by a common denominator already during the workshop. The next step was to transcribe the recorded material. The transcript was in total 41 A4 strips. Even though the topics were carefully chosen prior to workshop, many of the issues brought up were similar in all three categories but from a slightly different perspective. One reason for this might be the lack of clearly defining the topics and facilitator's lack of experience in conducting similar types of workshops.

No numerical data was gathered, except for the vote results of the most important ideas brought up during the idea phase. In addition to the topics covered during the different phases of the workshop, the participants were asked to choose one word from describing Freight Forwarding Company X the best. A list of key words was sent in advance to the participants. This list of key words was created in cooperation with the country manager and they were retrieved by using Freight Forwarding Company X's corporate values as source. The purpose of this exercise was to check if Freight Forwarding Company X executes its business according to the values.

6.3.1 Criticism phase

Below three topics were asked to be processed during the criticism phase:

- **Core Product**: air and ocean freight services
- **Customer Service**
- **Sales**

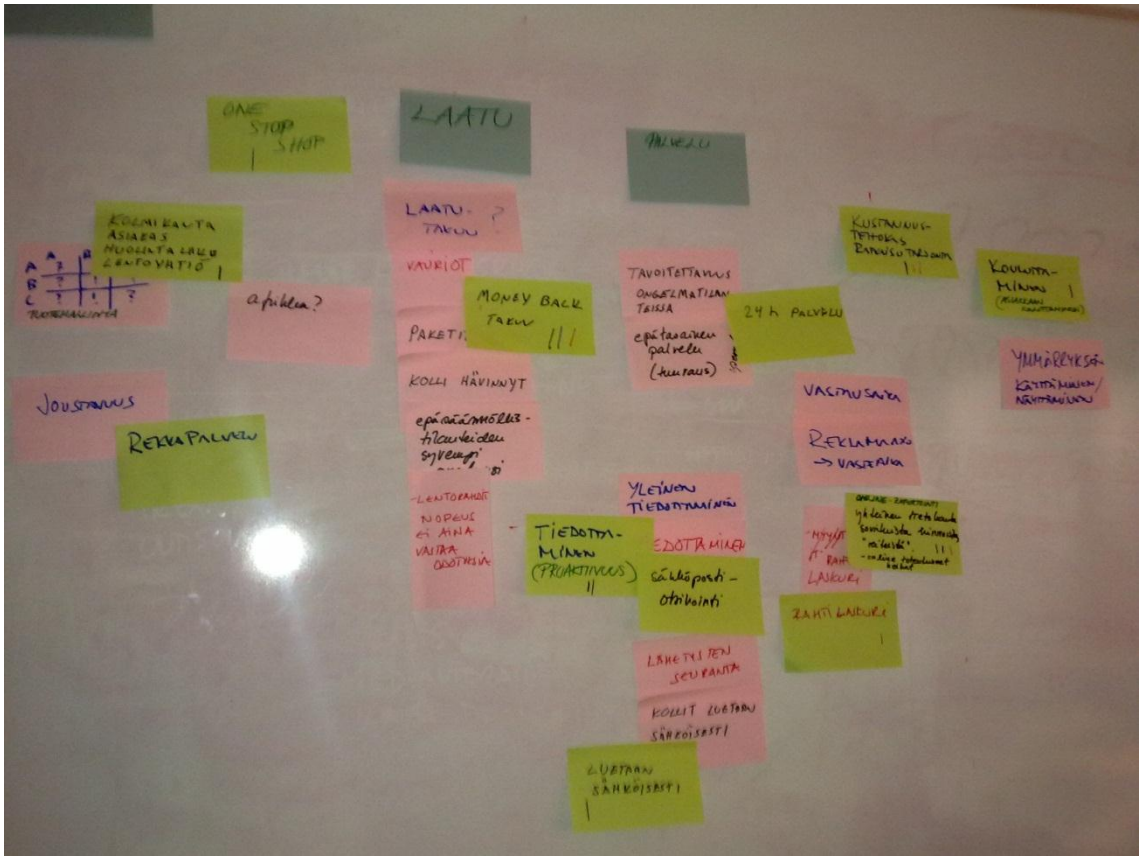
Since the participants were not active enough during the first discussion point, the facilitator had to encourage them by asking supporting questions. The questions were thought of in advance and were presented as neutral as possible in order to not direct the course of discussion too much. For the core product points, the participants were asked to think about the transportation accuracy in terms of lead-times, comprehensiveness of Freight Forwarding Company X's network meaning if all transport modes and locations needed by the customer can be covered by using Freight Forwarding Company X, does the dispatch frequency serve customer needs, and if the customer thinks they get value for their money when using Freight Forwarding Company X.

During the customer service point, the participants were asked if they think the daily cooperation with Freight Forwarding Company X staff is on a satisfying level, if operational and sales are available well during the working hours and if issues have been taken care of in a professional and efficient manner. Such issues could be related to delays, damages or claims. For the last point related to sales, participants were asked to think about if the offers made by Freight Forwarding Company X sales team are competitive enough and submitted on time.

During the workshop the PostIt's were arranged in three main categories which were Core Product, Quality and Customer Service. These main categories were chosen by the participants themselves. During the product and service related points, a lot of IT related criticism topics were brought up by the participants even though this was not even being brought forward by the facilitator during the supporting questions. One reason for this is presumably the nature of Freight Forwarding Company X's business – the offered products are seen as immaterial which is why the importance of tools which give any visibility to the rendered services, are seen as important.

The Core Product related category contained flexibility, product management and product range related issues such as importance of subcontractor management. The Quality category contained mostly exception management or IT related issues such as reliable traceability of shipments or speed and accuracy of information in case of exceptions such as delay or damage. The Service category comprised of proactive communication and availability and quality of staff related issues. Due to the inter-relation between the different categories, after transcript the categories were further arranged based on the discussions with Freight Forwarding

Company X's management.



Picture 2: PostIt notes arranged by a common denominator during workshop

Due to the overlapping criticism points mentioned for each topic, the categories were arranged per below for the analysis purposes as per below.

	Company			
	A	B	C	D
	Product Range (incl. IT solutions)			
Criticism Phase	Not enough control over subcontractors	No live tracing possibility	Poor track & trace systems	No freight cost calculator
			No online reporting possibility	Transit times do not match the ones given in the offer
	No quality guanratee	Poor handling	Poor handling	No quality guanratee
	Customer Service (Operational & Sales)			
	Not enough proactive information sharing	Not enough flexibility amongst staff	Not enough flexibility	
		Brand perception does not reflect reality	Slow deviance communication	
			Inconsistent quality of customer service personell	
			Knowhow of sales people in regards to own products	

Table 2: Resuls of criticism phase

6.3.2 Product range including IT solutions

It was slightly surprising that all the participants highlighted IT related issues in many occasions during the criticism phase especially since conversation was not directed to this direction at all by the facilitator. On the other hand this is understandable due to the fact that any company's supply chain responsiveness is depended on the speed and accuracy of given information. IT solutions at best are a tool which glues the different pieces of supply chain together. Companies B and C both mentioned IT related issues twice which were related to lack of electronic reading of collies which could ease exception management and give more accurate and on-time information about delays or damages in the supply chain. Company C also highlighted the lack of online reporting which could made available at a specific platform where customer would get access to easily not having to store and check different monthly reports to get all the needed information. When company C mentioned this in the discussions, company B also considered it being a good idea. Company A was very disappointed that even after several requests, Freight Forwarding Company X still had not provided them with a freight cost calculator which would help them to better budget their transportation spend. Also company C mentioned that one reason for wanting to have the monthly reports stored online, is the fact that their employees need to check the transportation spend to check against invoices and on the other hand, budget the future anticipated transportation costs. The only company who did not directly highlight IT related topics during the criticism phase was company A. Company A was highlighting the importance of a comprehensive solution offering and flexibility of service offering. He specifically mentioned the lack of trucking ser-

vice. Company A also had a concern over the subcontractor management and particularly if Freight Forwarding Company X is able to control its subcontractors to the level that is needed by the final customer. Company A made a reference to a situation where goods are delayed but not reported by Freight Forwarding Company X's subcontractor. These cases can also be seen as IT issues in the sense that due to the lack of integration between Freight Forwarding Company X's and subcontractor system and lack of IT standards in the air and ocean industry, Freight Forwarding Company X is not informed immediately once the deviance occurs but rather the information is depended on the customer service personnel of Freight Forwarding Company X's subcontractor and further on Freight Forwarding Company X's staff. This delays the information flow to the customer which could be solved via an active integration between the different IT systems. The term quality guarantee was mentioned by companies A and D. Here some examples were asked to be given and company A gave an example that should the services not be rendered as promised, for example the given transit time is exceed by X days or the transported goods are damages; the customer should be able to withdraw from paying the invoice or at least get a discount. Some competitors of Freight Forwarding Company X were alleged to have such a guarantee which was seen as favorable for them when choosing a transportation partner.

6.3.3 Customer service – operational and sales related

Lack of capability to handle special requests such as changing the transportation mode in the middle of shipping was referred to as lack of flexibility by company A. According to company A, they face such situations come up every now and then when a shipment which has been booked as ocean freight all of a sudden becomes urgent and needs to be moved on airfreight. Lack of accurate and timely information in case of exceptions such as delays or damages was being brought up by companies C and D. This was partly considered as an IT issues due to the lack of live tracing but partly also due to the inflexibility of the customer service personnel. Company D was especially concerned over the lack of consistency of staff even in the same department in case of vacation coverage whereas company B said staff is inflexible to handle requests which are not related to their own department as such. Lack of flexibility was one issue brought up as well in relation to professionalism of staff. Especially operational people tend to play a game of table tennis in case an issue brought up by the customer does not 100 % belong to a specific department. In these cases the customer is the one suffering. Uneven quality when nominated person is on leave was seen as being an issue which leads the customer to think that there is not enough information sharing within a department. The biggest concern in relation to the sales organization was that it seems that the sales people do not know the organization service offering in enough detail which leads to the fact that they do not actively offer all products which are available within Freight Forwarding Company X. This could also be seen as lack of customer knowhow in terms of their requirements.

6.3.4 Idea phase

After the criticism phase the participants were asked to find solutions to the found shortages in the defined categories. After the idea phase was concluded, the participants were asked to vote the ideas which were considered to be best solutions to the identified issues. Each participant had 4 votes.

	Company			
	A	B	C	D
Idea phase	**Product Range (incl. IT solutions)**			
	Widen product portfolio (e.g. Trucking)	Aim for one-stop-shop	Joint teamsite	Freight cost calculator helps customer to budjet better
	Tripartite agreements with airlines & shipping lines			
	Customer Service (Operational & Sales)			
	Money back guarantee		Proactive information sharing	
	Share information via newsletter	24/7 service key to availability	24/7 service on Nordic level	
	Train and educate customers	Money back guanratee	Achieve more efficient communication by making clear headlines for emails	
	Make training as a part of sales people's work		Train new people to get consisntecy throughout the organization	
	Name a dedicated customer person to achieve better customer understanding and experience		Idea bank (share and brainstorm ideas with customer on transport modes)	

Table 3: Results of idea phase

During the idea phase it was noticeable that the solutions to the found problems were similar in many cases. Maybe this was due to the fact that companies were influenced by one another and talked and exchanged ideas during the course of the workshop. Company A and B brought about a similar idea of widening the product portfolio and thus establishing Freight Forwarding Company X as “one-stop-shop” where the customer can buy all the needed services. Company C did not see this point as being an issue as they confirmed having a buying strategy which involves always several suppliers in order to ensure business continuity should something happened with one of the partners. Companies A and B again were having a similar opinion that should something happen during the transportation which could be considered as

a deviance from the agreed service, the customer company should be entitled to get back their money or withdraw from paying the services. Companies B and C considered a 24/7 service as a solution to staff availability issues and inconsistent quality of personnel. Company C was of the opinion that since such a service is not needed on a daily basis, if it would be more feasible to establish such a service an area Northern Europe level. Even though company D did not write this down as a solution to any of the issues, also they though having a 24/7 contact would be good so they would not have to wait for the information till the next day in some cases. Company A underlined the need for training and educating the customer side as well. This was considered as a solution to unrealistic expectation by customers which is one reason why customers and Freight Forwarding Company X run into misunderstandings sometime and which ultimately makes the work of the a freight forwarder more difficult. Company A also highlighted that fact that the logistics people want to look good in the eyes of their own organization which is why they need to get information on the industry changes preferable at the same time as the freight forwarders get the information. In case such information would be shared on a regular basis via newsletter or similar, the customer through this as being good advertisement for Freight Forwarding Company X since it gives the needed visibility within the customer organization. This visibility is of help in many cases where the management of the customer organizations sees logistics and transportation as nothing else but as a cost.

6.3.5 Voting results

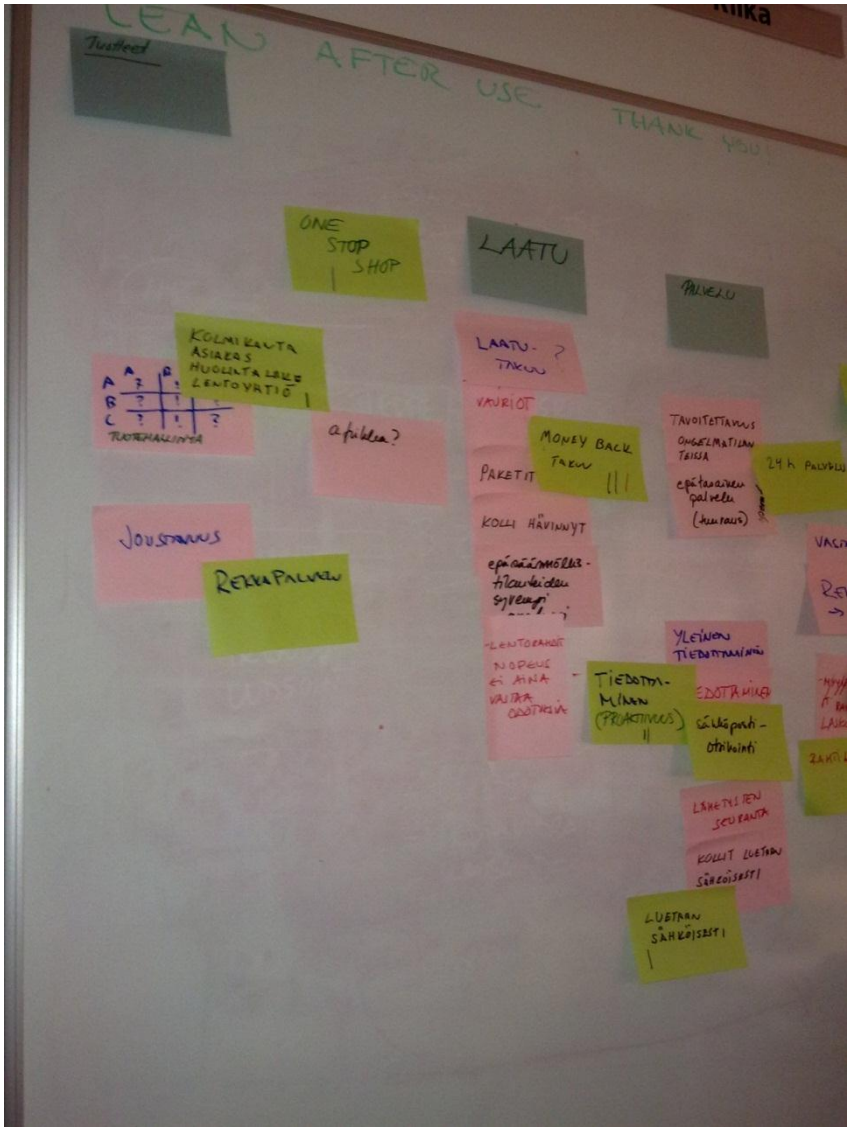
Each participant was given 4 votes for voting the most important ideas which would be reworked by Freight Forwarding Company X management as improvement suggestions to enhance the business relationship. The participants voted by marking one line per vote to the green PostIt notes. It was allowed to vote for the same idea many times and even use all votes for one idea. The following ideas got votes:

- One Stop Shop – 1 vote
- Tripartite agreement with airlines / shipping lines to enhance the subcontractor management – 1 vote
- Money Back Guarantee – 3 votes
- Enhance proactive information sharing / communication lines – 2 votes
- Electronic reading of shipments – 1 vote
- Freight cost calculator – 1 vote
- Competitive and cost effective solution offering – 3 votes
- Online platform for information sharing e.g. reporting – 3 votes
- Education of customers – 1 vote

The voting results were quite scattered around many topics….

6.3.6 Value discussion

In the beginning of the workshop the participants were being told that the last and final phase, execution, of the future workshop would be done by the management of Freight Forwarding Company X together with the facilitator. Three ideas which get the most votes would be worked out as improvement plans in order to get better customer satisfaction levels. The three ideas which got the most votes were Money Back Guarantee, Competitive and cost effective solution offering and online platform for information sharing. These three ideas all came from different participants - the first came from customer B, second from customer A, and the last one from customer C. Even though the outcome of the execution phase will not be explained in detail, it must be said that three of the ideas which have come up, have been reworked to actual solutions which are offered to multiple customers nowadays.



Picture 4: Voting results

Once participants confirmed the attendance to the workshop, they received a separate email from the facilitator listing the following words on an email and asking them to choose the first word which comes to their mind when talking about Freight Forwarding Company X. Noticeable is that the customers were not respected to choose a word from the list if they thought of something else. As a last part of the workshop, a discussion on the choses made by the participants took place.

- Willingness to renew
- Professional – chosen by company A
- Proactive
- Open – chosen by companies B and D
- Trustworthy
- Honest
- Safe
- Green
- Cooperative – chosen by company C

When asking for a reason for choosing these words all participants said that since freight forwarding is considered as people's business, the words which were chosen really reflect the relationship of a specific customer service or sales person. All underlined that when choosing the option they thought of their counterparts and not the company the image the company wants to pursue. One can then question if such an exercise really made any difference and gave new information. On one hand, the chosen words were all very positive considering that the customer also had the possibility to choose the exact opposite of the terms. On the other hand, the words also could be seen as a positive sign that Freight Forwarding Company X has right sort of people in staff which help the company to strengthen the image it wants to pursue.

6.3.7 Conclusions after workshop execution

The research questions of this thesis were defined as follows:

- Can something be learned from customers by using future workshop method which would help to enhance the customer service experience and make it as smooth, effortless and pleasant as possible?

- Can the usage of future workshop bring along new ideas, innovations, which could be useful for Freight Forwarding Company X?

When going through the material it became quite obvious that the research questions were not precise enough to properly have been answered by the material. Surely it is not wrong to claim that a lot of new was learned from the customers by using future workshop methodology and it indeed helped to bring out some deficiencies in Freight Forwarding Company X's operations. The target to achieve changing customers' service experience and make it as smooth effortless and pleasant as possible, is too vague and not measurable. This could have been left aside from the research question completely. The second question was if the usage of future workshop can bring along ideas which could be helpful to Freight Forwarding Company X and here the material clearly indicated that yes, such events can help to surface ideas which customers have. These ideas help to improve the day to day business relationship with customers and are not related to new service innovations. In order to really achieve service innovations, the workshop should have been planned in a different way and dedicating one workshop for only this topic. However, I dare to claim that these ideas which surfaced in the workshop would have never been brought up by using a standard customer satisfaction survey conducted in a similar manner what Freight Forwarding Company X has used before. Some of the ideas brought up by customers were small things which can have a significant effect on the user-friendliness and customer orientation of a company. For example executing the wish of customer A about the industry related training, Freight Forwarding Company X could help the customers to look better within their organization and thus seeing this being achieved with the help of Freight Forwarding Company X. Some of the ideas might have come up in customer meetings but one can question whether all these ideas would have risen without the dialogue between the customers and the possibility of letting them exchange ideas.

Even though the initial results were gone through immediately after the workshop, there was a gap of more than two years between the actual research and analysis phase. However, the results can be still found to be actual and valid. Obviously some topics, especially on the IT side, have developed over the years, but many of the issues found during the workshop are still real; especially the ones related to customer service. In my opinion, the greatest consequence of this research has been the fact that it has alerted people in realizing that there are actually other ways of find out what customer think about a company and its services than the traditional customer surveys. There is a still long way to define a clear process on how the user-centered design methods could be used more consistently and how they eventually could be attached to the customer management strategy.

6.3.8 Comments and feedback from participants and Freight Forwarding Company X's management

The feedback regarding the workshop was freely discussed over lunch. No formal feedback form was asked to be filled in after the workshop. Towards the end of the workshop the facilitator did ask how the participants felt about the workshop right after the session. 3 out of 4 thought that these kinds of events are good since the participants have a chance to learn from one another. One participant had a comment that such an interactive workshop which is designed to serve a benefit of large number of customers add value only if one is able to leave own and company's interests aside, reserve enough time and dedicate the time reserved for the theme in question. The challenge seen was the fact that the time has to be taken from somewhere and the question remains whether companies are willing to invest time in something which directly is not seen as a value add for them.

The management of Freight Forwarding Company X considered the workshop as an interesting and a new approach towards customers. They were hesitant about the approach prior to the workshop but after the first one successfully conducted, they are thinking of extending and exploring the world of user centered design further.

6.3.9 Results analysis by the researcher

The actual study and analysis were done two years apart from each other. The research did not progress as per the initially agreed schedule due to time challenges at work after which I left for maternity leave. In principal I considered it not good that the analysis was done so long after the workshop since the little details tend to get forgotten as time elapses even though the material was recorded. On a positive note, my expertise grew within those two years and I got new insights to studies and working life by taking a step back and relooking it again with a fresh mind.

The quality of the recorded material I am fairly happy about even though the camera could have placed differently so that the faces of all participants would have been seen clearly. Now with this positioning of the camera participants D and A were left outside the picture, D almost completely and from participant A only half of the face and the expressions were seen. The quality of voice was good making the transcript phase more pleasant.

It is good to obtain a user-oriented mindset at all times but still remember that you are not the user. When involving users in the development process, it needs to be properly planned. Iterative design is preferred which means that once you have done the first draft, evaluate it with the users and then improve.

6.4 Execution of the future workshop method

As a summary I can see that arranging the future workshop was the right choice this audience. As already confirmed in the theoretical part, the method is particularly suitable for an idea phase of a service or a product. It can also work for an offering which already exists if the participants have experience of using the product or service. The definite strength of this method is its flexibility and the discussive manner it represents. Giving the participants a subject which is not restricted too much works the best. Probably because I had not defined the subject in too many details, the topics were overlapping across the board. I find it important that the facilitator is neutral to the participants and subject in order not to let any existing relationship impact the authenticity of the study. It is particularly good for a small group of people as it allows the people to discuss openly and equally so even the quiet or shy people are encouraged to speak up the opinion. In order to create a good atmosphere for discussion, a round of introduction is important especially if the participants do not know one another. The facilitator has an important role because slight jokes and motivating participants are an important part of a successful workshop. At its best the participants get a feeling of doing together and they inspire one another which enables the ideas flying. In case supporting material is wanted to be used, pictures, music or even have the participants visualize their ideas by drawing might be useful. Music could be used to active people and rhythm the workshop phases. Even though the facilitator has an important role in keeping the conversation living, the alustus should be kept quite short in order to allow and give more space for more and innovative ideas. The future workshop could be used as well for having many workshops around the same topic with different participants and then compare the results from different angles for example (customer, internal, financial). One great part of this method is that it is very affordable and does not require too much knowledge in advance.

There is nothing so good that that there would not be something bad as well. The future workshop does not work too well with bigger groups as it is difficult to equally hear everybody's voices. The future workshop requires a lot from the workshop facilitator – she or he has to be in big enough of a role to motivate the participants to allow good conversation but at the same time, be in a small enough of a role not to lecture, justify anything or present own opinions. The facilitator also has to be sensitive to people's feelings and be good at judging people's behavior. The workshop fails or succeeds with the facilitator who has a demanding role and needs clear targets in order to make the workshop a success. Due to the criticism phase this method is not necessarily suitable for situations where there are a lot emotions on the air which could be related for example to or actions of people. It is important to record the workshop due to the fact that discussion might be so intense that taking notes might be too hectic or risky. There is risk that an abstract subject might not lead to a successful workshop especially the theme is less familiar. Using visual aids might provoke too much. All in all, one could say that there are great risks that the workshop will fail.

6.5 Suggestions for further studies

During this study I had an initial goal to build a toolbox named CUMA (customer management), which would have served the management of Freight Forwarding Company X when conducting similar type of research in the future. The toolbox would have been compiled keeping in mind primarily the field sales staff which can use the tools from the box to help them to listen their customers better. When such study is conducted out on the field, it means that it must be simplified to better suit the need of a hectic sales position. Since I had no time do this within this study, I suggest that this could be done as the next step when trying to incorporate the user-centered design methodology in freight forwarding world. This toolbox should ideally contain also other similar types of methods which would be easier to conduct out in the field.

6.6 The ethic of study

There are a lot of questions about ethics of study when conducting qualitative research. The ethics should be kept in mind throughout the whole research process. One of the main purposes of ethics is to do good and right by others. Participants of any qualitative research have rights which begin with their individual human rights to privacy, confidentiality and the right to choose whether or not to participate in a research project. Ethics is used to judge the behavior of the researcher and the consequences of the research. It is rather impossible to list all potential dangers for research participants. Participating in a research might result to lose of privacy because of the collection of certain types of data. Participants might be endangered to become legally liable if private information is made public. The participant might also suffer anxiety because of what the participants may be asked to do or be put under pressure to participate in activities when they would rather not. In order to uphold the right of participants, the researcher always has to seek the permission before collecting any information. To safeguard the right of privacy, the participants should contribute the research anonymously. While anonymity refers to the individuals, confidentially refers to the information provided by the participants. To ensure participants' privacy, anonymity and information confidentiality, consent from the participants should always be demanded in writing before conducting qualitative research. (Bailey, V. and Bemrose, G. and Goddard, S. and Impey, R. and Joslyn, E. and Mackness, J. 1995, 4-9.)

In order to follow the three basic principles of ethics, the future workshop invitation already included the information about the fact that the event would be recorded for research purposes. The invitation also emphasized that the recording would be destroyed after the research material was transcribed and analyzed. By enrolling to the event, the consent of the participants was acquired. On the actual day of the workshop, it was again stressed that the

course of the day would be recorded and by agreeing to participate their approval was acquired. The participants also knew right from the beginning that the workshop would be recorded for research purposes and it will not be given to any third party. Also it was clearly said that the name of the participants or the company they represent would not be revealed in the study.

6.7 Validity and reliability

In qualitative research the concepts of reliability and validity have attained different interpretations. The terms as such have been traditionally used for quantitative research and especially the concept of validity is unclear since one could claim that all research which includes human interaction is always different and the traditional measurements for validity and reliability cannot be used. However, the validity and reliability should always be somehow assessed even if it would not be done by using the exact terminology. (Hirsjärvi, S. and Remes, P. and Sajavaara, P. 1997, 226-227.)

Validity measures the ability of the selected research method to measure what was meant to be measured and it can analyzed from many different perspectives. For example if the participants of a research understood the questions and the target as the researcher had meant them to be understood. Reliability means the stability and consistency of the research results over time. In practice this means that similar results would be achieved if the research is carried out again in a similar manner. The reliability can be verified in many ways and there are techniques used especially in qualitative research which measure the reliability. The reliability of qualitative research improves if the researcher describes the research execution phase in detail in every step of the process. A detailed description of the research circumstances and places where material was conducted improves the reliability. Also the time spent on the research, possible distractions, and misinterpretations during the research and researchers own interpretation of the situation. (Hirsijärvi et al. 1997, 226-227.)

In order to make the research results valid, the workshop script was well planned in advance in order to maximize the probability for the participants to understand the different phases and supporting questions well. In order to support the participants to understand the process, they were show a short slide show about what future workshop actually is in advance. This slide show was focused on informing them of the roots of the future workshop, the process itself and the possible positive impacts it can have if people participate actively. The reliability of the results wanted to be improved by describing the course of the day very detailed. I as the researcher also strongly believes that another person conducting the study would have ended up with similar kind of results would the participants also been same. Also should the

process been iterative, and an interview would have been conducted after the workshop asking the same questions, I believe the results would have been of similar kind.

6.8 Selfassement

I am not fully satisfied with the level of my work. I originally had great ambitions to change the whole freight forwarding world by introducing user center design methods to our company and customers. Later on I realized that the process in still in its infancy and things are not going to be changed at once. Nevertheless, I still would have wanted to go one surface deeper and develop a toolbox call CUMA (customer management) which could have been used by the company's sales people to find out the hidden issues / concerns / needs of customers. It was rather disappointing that there was no time to realize this plan during this study but it needs to be left for further studies.

The case study and especially the methods used to gather user data could have been better thought of in advance. It became apparent during the transcript and analysis phase that I had not gathered enough information in advance prior jumping on to the study. The research questions itself were not precise enough which is why the material as well is quite generic. Also the usability of the material would have been greater should the selected criticism topics were more precise. As a result I have a lot of good and valid but very generic ideas which apply not specifically to these customers but the whole industry as such. The conducted methodology also was not very complicated and the study would have been more challenging should I have used for example another methodology in the side as well. The future workshop could have been complimented by using probes for example. The creation of new element can be said to be seen in this study not necessarily in the form of results but more the choice of research method. I also think I did right by choosing an easily understandable method out of the wide variety of the different options. The analysis could have been more in-depth and maybe it could have been better analyzed by using for example computer aided analysis tools e.g AtlasTi.

Compliments

This thesis is dedicated to my son Väinö who is my greatest inspiration in life.

I would like to thank the representatives of Freight Forwarding Company X Finland, particularly Freight Forwarding Company X's BU Head of Sales, for trusting me with her customers and still believing in me even after the work got delayed. My instructor, Senior Lecturer of Logitics Suvi Sivén, also deserves a big thank you for believing in me and motivating me to

finalize the work. Vesa, thank you for your continued support, I would have not finalized this thesis without your help.

List of references

Aaltola, J. and Valli, R. 2001. Ikkunoita tutkimusmetodeihin. 2, Näkökulmia aloittelevalle tutkijalle tutkimuksen teoreettisiin lähtökohtiin ja analyysimenetelmiin. Jyväskylä: Gummerus Kirjapaino Oy.

Andersson, J. 2011. Lentohuolinta: pelkkä ulkoistettu ulkomaankuljetus vai lisäarvoa tuottava palvelu? Kerava: Laurea-ammattikorkeakoulu.

Arantola, H. and Simonen, K. 2009. Palvelemisesta palveluliiketoimintaan – asiakasymmärrys palveluliiketoiminnan perustana. Helsinki: Tekes.

Bailey, V. and Bemrose, G. and Goddard, S. and Impey, R. and Joslyn, E and Mackness, J. Essential research skills 1995. London: Collins Educational.

Chopra, S. and Meindl, P. 2004. Supply Chain Management – Strategy, Planning and Operation. 2nd Edition. New Jersey: Pearson Education.

Eskola, J. and Suoranta, J. 2008. Johdatus laadulliseen tutkimukseen. 8. painos. Jyväskylä: Gummerus Kirjapaino.

Grönroos, C. 2000. Service management and marketing. A customer relationship management. 2nd edition. West Sussex: John Wiley and Sons Ltd.

Hannington, B. 2003. Methods in the Making: A perspective on the State of Human Research in Design. Massachusetts Institute of Technology. Design Issues: Volume 19, Number 4, Autumn 2003. 9-18.

Helenius, R. 2009. ARVON JÄLJILLÄ - Huolitsijan rooli yrityksen lähtölogistiikassa pohjautuen Michael Porterin arvoketjuteoriaan. Tampere: Pirkanmaan ammattikorkeakoulu.

Hirsjärvi, S. and Remes, P. and Sajavaara, P. 1997. Tutki ja kirjoita. 13.-14. osin uudistettu painos. Keuruu: Otavan Kirjapaino Oy.

Huolintaliitto. Finnish Freight Forwarders' Association. Referred 25.10.2013.

http://www.huolintaliitto.fi/huolintaliikkeidenliitto/en/index.php

Hyysalo, S. 2006. Käyttäjätieto ja käyttäjätutkimuksen menetelmät. Helsinki: Edita Publishing Oy.

Hyysalo, S. 2009. Käyttäjä tuotekehityksessä. Viitattu 25.10.2013.

https://www.taik.fi/kirjakauppa/product_info.php?cPath=23andproducts_id=138

Kamppinen, M., Kuusi, O. and Söderlund, S. 2002. Tulevaisuudentutkimus – Perusteet ja Sovellukset. Helsinki: Suomalaisen Kirjallisuuden Seura.

Keinonen, T. and Jääskö, V. (toim). 2003. Tuotekonseptointi, Helsinki: Teknologiateollisuus.

Kiimamaa, J. Tulevaisuusverstas – ongelmia, ideoita ja toteutuksen suunnittelua yhdessä. Nordia Tiedonantoja 2/2003.

Kumar, V. 101 Design Methods: A Structured Approach for Driving Innovation in Your Organization. New Jersey: John Wiley and Sons, Inc.

Laitinen, T. 2002. Kansainväliset lentorahtipalvelut Suomessa. Tampere: Tampereen teknillinen korkeakoulu.

Mattinen, H. 2006. Asiakkuusosaaminen: kuuntele asiakastasi. Helsinki: Talentum.

Metsämuuronen, J. 2005. Tutkimuksen tekemisen perusteet ihmistieteissä. Jyväskylä: Gummerus Kirjapaino Oy.

Polaine, A. 2013. Service design: from insight to implementation. Brooklyn, NY: Rosenfeld Media.

Rubik, A 2012. TOPI Tulevaisuudentutkimuksen oppimateriaali. Referred 29.4.2013 http://www.tulevaisuus.fi/topi/default.asp Menetelmät > Skenaariotyöskentelyn sovellukset > Osallistavat tulevaisuudentutkimuksen menetelmät

Schmitt, B. 2003. Customer experience management: a revolutionary approach to connecting with your customers. New Jersey: John Wiley and Sons, Inc., Hoboken.

Schneider, B. and White, S. 2004. Service quality: research perspectives. Thousand Oaks, CA: Sage Publications.

Tilastokeskus. Foreign Trade of Goods. Referred 25.10.2013. http://tilastokeskus.fi/meta/til/tavu_en.html

Tulli. Transport statistics. Referred 25.10.2013. http://www.tulli.fi/en/finnish_customs/statistics/statistics/transport/index.jsp

Tuomi, J. and Sarajärvi, A. 2009. Laadullinen tutkimus ja sisällönanalyysi. 6., uudistettu laitos. Latvia: Livonia Print.

http://www.tulli.fi/en/finnish_customs/statistics/statistics/transport/index.jsp
Tuulaniemi, J. 2011. Palvelumuotoilu. Talentum Media Oy.

Pictures

Figures

Tables